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EXAMINER

MATTIS, JASON E

| ART UNIT | PAPER NUMBER |
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2616

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,750

Applicant(s)

SUONVIERI, JUKKA

Examiner

Jason E. Mattis

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the amendment filed 3/27/06. Due to the amendment the previous rejections of claims 1-3 under 35 U.S.C. 112, second paragraph, have been withdrawn. Claims 1-9, 11, and 12 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7-9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhodes et al. (U.S. Pat. 5909437) in view of Laham et al. (U.S. Pat. 6442372) and in view of Treach (U.S. Pat. 5898382).

With respect to claim 1, Rhodes et al. discloses a method of controlling a device in a radio communication system (**See the abstract of Rhodes et al. for reference to software being downloaded from a central station of a wireless communication system to a remote subscriber station for configuring the remote subscribers station to permit wireless communication of user**

telecommunications equipment, devices, at the remote subscriber station).

Rhodes et al. also discloses network elements and subscriber stations in data communication with each other **(See column 7 lines 17-26 and Figure 1 of Rhodes et al. for reference to a central terminals 10, network elements, and subscriber terminals 20, subscriber stations, in communication with each other using microwave links).** Rhodes et al. further discloses a subscriber station management system supervising and controlling the operation of the subscriber stations by control signals transmitted via a radio path **(See column 8 lines 20-30, column 25 lines 58-62, and Figure 3 of Rhodes et al. for reference to a personal computer being provided as a site controller 56 supporting the central terminal and for reference to software, control signals, that originate from the site controller 56 being downloaded from the central terminal 10 to the subscriber unit 20, where the software is executed to control the subscriber station 20).** Rhodes et al. also discloses that the device is connected to the subscriber station **(See column 7 lines 38-56 and Figures 2A and 2B of Rhodes et al. for reference to devices being connected to the subscriber station 20 through network terminal unit 32).** Rhodes et al. further discloses a control means arranged to the subscriber station for controlling and supervising the device **(See column 7 lines 38-56 and Figures 2A and 2B of Rhodes et al. for reference to network terminal unit 32 of subscriber unit 20 connecting to devices and controlling the operation of the peripheral devices so that the devices may communicate with the network).** Rhodes et al. also discloses controlling the device by means of the subscriber station management system by

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transmitting control signals from the subscriber station management system via a radio path to the control means of the subscriber station (**See column 25 lines 58-62 of Rhodes et al. for reference to software that originates from the site controller 56 being downloaded from the central terminal 10 to the subscriber unit 20, where the software is executed to control the subscriber station**). Rhodes et al. further discloses that in response to the control signals, the control means control and supervise the operation of the device (**See column 7 lines 38-56, column 16 lines 60-67, and Figures 2A and 2B of Rhodes et al. for reference to the subscriber unit 20 connecting to devices and controlling the operation based on software, or active code, which has been downloaded and is store in the peripheral devices**). Rhodes et al. does not specifically disclose that the device connected to the subscriber station is a radio repeater provided with a radio receiver for receiving radio signals and with a radio transmitter for transmitting the received signals to subscriber stations in communication with other devices. Rhodes et al. also does not disclose supervising the operation of the radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change.

With respect to claim 4, Rhodes et al. discloses a radio communications system (**See Figure 1 of Rhodes et al. for reference to a radio communications system**). Rhodes et al. also discloses subscriber stations comprising means for transmitting and receiving telecommunications signals and network elements in data transmission connection with the subscriber stations by radio signals (**See column 7 lines 17-26 and Figure 1 of Rhodes et al. for reference to a central terminals 10,**

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network elements, and subscriber terminals 20, subscriber stations, in communication with each other using microwave links, meaning the subscriber terminals have a mean for transmitting and receiving signals over the microwave links). Rhodes et al. also discloses at least one subscriber station to which a device is connected **(See column 7 lines 38-56 and Figures 2A and 2B of Rhodes et al. for reference to devices being connected to the subscriber terminal 20 through network terminal unit 32).** Rhodes et al. further discloses a subscriber station management system comprising a means controlling and supervising the operation of the subscriber stations by means of radio signals transmitted to the subscriber stations via the network elements and for supervising the device connected to the subscriber station **(See column 8 lines 20-30, column 25 lines 58-62, and Figure 3 of Rhodes et al. for reference to a personal computer being provided as a site controller 56 supporting the central terminal and for reference to software, control signals, that originate from the site controller 56 being downloaded from the central terminal 10 to the subscriber unit 20, where the software is executed to control the subscriber station 20 and the devices connected to the subscriber station).**

Rhodes et al. does not specifically disclose that the device connected to the subscriber station is a radio repeater provided with a radio receiver for receiving radio signals and with a radio transmitter for transmitting the received signals to subscriber stations in communication with other devices.

With respect to claim 9, Rhodes et al. discloses a subscriber station in a communications system **(See column 6 line 66 to column 7 line 10 and Figure 1 of**

Rhodes et al. for reference to a subscriber terminals 20 in a communications system). Rhodes et al. also discloses the subscriber station having a means for transmitting and receiving communications signals over a radio path in order to set up a data transmission connection to other parts of the system **(See column 7 lines 17-26 and Figure 1 of Rhodes et al. for reference to a central terminals 10 and subscriber terminals 20, in communication with each other using microwave links, meaning that there is a means for transmitting signals to set up data transmission between the subscriber terminal and other part of the network).** Rhodes et al. further discloses a means for controlling the operation of the subscriber station in response to control signals received via the radio path **(See column 25 lines 58-62 of Rhodes et al. for reference to software, control signals, being downloaded to the subscriber unit 20, where the software is executed to control the subscriber station).** Rhodes et al. further discloses the subscriber station transmitting data on the state of the subscriber station to other parts of the system **(See column 3 lines 12-16 of Rhodes et al. for reference to the subscriber terminal sending response messages, state messages, to the central station, which is another part of the network).** Rhodes et al. also discloses a connecting means for connection a device to the subscriber station **(See column 7 lines 38-56 and Figures 2A and 2B of Rhodes et al. for reference to devices being connected to the subscriber station 20 through network terminal unit 32).** Rhodes et al. further discloses the subscriber station comprising a control means responsive to the received control signals to control and supervise the operation of the device connected to the

subscriber station in response to control signals received via the radio path (**See column 8 lines 20-30, column 25 lines 58-62, and Figure 3 of Rhodes et al. for reference to a personal computer being provided as a site controller 56 supporting the central terminal and for reference to software, control signals, that originate from the site controller 56 being downloaded from the central terminal 10 to the subscriber unit 20, where the software is executed to control the subscriber station 20, which in turn uses the software to control the communications of the devices**). Rhodes et al. does not specifically disclose that the device connected to the subscriber station is a radio repeater provided with a radio receiver for receiving radio signals and with a radio transmitter for transmitting the received signals to subscriber stations in communication with other devices.

With respect to claims 1, 4, and 9, Laham et al., in the field of communications discloses a system where a radio repeater provided with a radio receiver for receiving radio signals and with a radio transmitter for transmitting the received signals to subscriber stations is controlled by a subscriber unit (See column 6 line 27 to column 7 line 34 and Figure 6 of Laham et al. for reference to a repeater 30 being under control of a software and hardware system 72, which acts as a subscriber station that receives commands from a remote MCRT 20 over a wireless radio link and for reference to information being sent from a communication site 8 to a user station 28 through the repeater 30 meaning that the repeater 30 includes both a receiver for receiving radio signals and a transmitter for transmitting the received signals to the user station 28). Using a radio repeater provided with a radio receiver

for receiving radio signals and with a radio transmitter for transmitting the received signals to subscriber stations connected to a subscriber station has the advantage of allowing repeaters, which are located in remote areas, to be controlled from one central area without the need to physically access the repeater at the remote location.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Laham et al., to combine the use of a radio repeater, as suggested by Laham et al., with the remote controlling system and method of Rhodes et al., with the motivation being to allow repeaters, which are located in remote areas, to be controlled from one central area without the need to physically access the repeater at the remote location.

While Laham et al. does disclose controlling a repeater remotely by wirelessly sending control signals to a controller of the repeater, Laham et al. does not specifically disclose that the control signals are used to change the frequency channels used by the receiver and transmitter of the repeater.

With respect to claims 1, 4, and 9, Treatch, in the field of communications discloses a radio repeater receiving signals at a control means such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change (See column 3 line 45 to column 4 line 8 and Figure 4 of Treatch for reference to a repeater system 40 that includes a control computer 41 that receives signals, which are control signals, from a scanning receiver 53 that are used by the control computer 41 to change the channels, with each channel corresponding to a frequency, the repeater system 40 uses to receive and

transmit data). Receiving signals at a control means of a radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change has the advantage of allowing the frequency usage pattern of a wireless system to be changed and optimized without the need to physically access the repeaters of the system at the location of the repeaters.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Treatch, to combine receiving signals at a control means of a radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change, as suggested by Treatch, with the system and method of Rhodes et al. and Laham et al., with the motivation being to allow the frequency usage pattern of a wireless system to be changed and optimized without the need to physically access the repeaters of the system at the location of the repeaters.

With respect to claim 2, Rhodes et al. also discloses that the network elements consist of base stations **(See column 7 lines 17-26 and Figure 1 of Rhodes et al. for reference to central terminals 10, which act as wireless base stations in the communication system).**

With respect to claim 3, Rhodes et al. discloses that the control means arranged to the subscriber station comprises at least a memory and processing means **(See column 16 lines 49-59 and Figure 15 of Rhodes et al. for reference to the communications controller of the subscriber terminals 20 including flash memories 310 and 312 and a digital signal processor 258).** Rhodes et al. also

discloses storing a control program in the memory of the subscriber station to control the device **(See column 16 lines 60-67 and Figure 15 of Rhodes et al. for reference to the subscriber terminal, which controls the communications of devices attached to it, storing code to control the peripheral devices in the flash memories 310 and 312)**. Rhodes et al. further discloses adapting the processing means to control the device on the basis of the control program stored in the memory and the controls signals transmitted by the subscriber station management system **(See column 16 line 60 to column 17 line 5 of Rhodes et al. for reference to storing a downloaded program, control signals, in one of the flash memories 310 and 312 and storing another program in the other flash memory and for reference to choosing which program to use to control the devices of the system)**.

With respect to claim 5, Rhodes et al. also discloses that the network elements are of base stations **(See column 7 lines 17-26 and Figure 1 of Rhodes et al. for reference to central terminals 10, which act as wireless base stations in the communication system)**.

With respect to claim 7, Rhodes et al. discloses that the subscriber station comprises a control means for controlling and supervising the operation of the device connected to a control bus in the subscriber station and that the management system comprises a means for controlling the control means of the subscriber station via control signals transmitted to the subscriber station **(See column 8 lines 20-30, column 25 lines 58-62, and Figure 3 of Rhodes et al. for reference to a personal computer being provided as a site controller 56 supporting the central terminal and for**

reference to software, control signals, that originate from the site controller 56 being downloaded from the central terminal 10 to the subscriber unit 20, where the software is executed to control the subscriber station 20 and for references to the devices connected to the subscriber station being controlled and supervised by the subscriber station through a control bus in the subscriber station).

With respect to claim 8, Rhodes et al. discloses that the subscriber station comprises a memory and processing means (See column 16 lines 49-59 and Figure 15 of Rhodes et al. for reference to the communications controller of the subscriber terminals 20 including flash memories 310 and 312 and a digital signal processor 258). Rhodes et al. also discloses a means for storing a control program in the memory of the subscriber station to control the device (See column 16 lines 60-67 and Figure 15 of Rhodes et al. for reference to the subscriber terminal, which controls the communications of devices attached to it, storing code to control the peripheral devices in the flash memories 310 and 312). Rhodes et al. further discloses adapting the processing means to control the device on the basis of the control program stored in the memory and the controls signals transmitted by the subscriber station management system (See column 16 line 60 to column 17 line 5 of Rhodes et al. for reference to storing a downloaded program, control signals, in one of the flash memories 310 and 312 and storing another program in the other flash memory and for reference to choosing which program to use to control the devices of the system).

With respect to claim 12, Rhodes et al. discloses that the subscriber station comprises a memory and processing means **(See column 16 lines 49-59 and Figure 15 of Rhodes et al. for reference to the communications controller of the subscriber terminals 20 including flash memories 310 and 312 and a digital signal processor 258)**. Rhodes et al. also discloses a means for storing a control program in the memory of the subscriber station to control the device **(See column 16 lines 60-67 and Figure 15 of Rhodes et al. for reference to the subscriber terminal, which controls the communications of devices attached to it, storing code to control the peripheral devices in the flash memories 310 and 312)**. Rhodes et al. further discloses adapting the processing means to control the device on the basis of the control program stored in the memory and the controls signals transmitted by the subscriber station management system **(See column 16 line 60 to column 17 line 5 of Rhodes et al. for reference to storing a downloaded program, control signals, in one of the flash memories 310 and 312 and storing another program in the other flash memory and for reference to choosing which program to use to control the devices of the system)**.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhodes et al. in view Laham et al. and Treatch and in further view of Archambaud et al. (U.S. Pat. 6304560).

With respect to claims 6 and 11, the combination of Rhodes et al., Laham et al., and Treatch does not disclose that the subscriber station, subscriber station management system, and other elements of the communications system are parts of a wireless local loop communications system, transmitting data and control signals wirelessly between the system elements.

With respect to claims 6 and 11, Archambaud et al., in the field of communications, discloses a wireless system that is a wireless local loop system with subscriber stations portable stations 18 and management systems located in wireless local loop base stations 17 **(See column 4 line 15 to column 5 line 8 and Figures 2 and 3 of Archambaud et al. for reference to the wireless local loop communication system)**. Using a wireless local loop system has the advantage of allowing the remote programming system to be implemented in a specific wireless local loop system instead of only in a general wireless communication system.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Archambaud et al., to combine the used of a wireless local loop communication system, as suggested by Archambaud et al., with the system and method of Rhodes et al., Laham et al., and Treatch, with the motivation being to allow remote programming system to be implemented in a specific wireless local loop system instead of only in a general wireless communication system.

Response to Arguments

6. Applicant's arguments filed 3/27/06 have been fully considered but they are not persuasive.

In response to Applicant's argument that Treatch fails to remedy the deficiencies of Latham and Rhodes because Treatch does not disclose "control signals transmitted from the claimed subscriber station management system via a radio path to the claimed control means of the subscriber station in response to which control signals the control means control and supervise the operation of the radio repeater such that the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter change", the Examiner respectfully disagrees. First, it is noted that the teaching of sending control signals from a management system to a control means of a repeater is found in the combined teachings of Rhodes et al. reference and Laham et al. reference, as shown in the rejections above. Therefore, the only claim limitation not found in the teachings of Rhodes et al. and Laham et al. is the limitation of control signals being used to change the frequency channels received by the radio receiver and the frequency channels used by the radio transmitter. As shown in the rejections above, and as pointed out in the Applicant's remarks, Treatch discloses using control data sent by a receiver 51 to a control computer 41 to adjust frequency channels used by the repeater. Further, it is noted that this control information is formed from signals that are received wirelessly by the antenna 53. Therefore, the rejection is based on a

combination of the teachings of Rhodes et al. and Laham et al. (the teachings of sending control signals from a management system to a control means of a repeater) with the teachings of Treatch (the teaching that a control signal is used to adjust frequency channels used by a repeater). Since the combined teachings disclose all claim limitations, the rejection is proper.

In response to Applicant's argument that Treatch actually teaches away from the claimed invention by teaching that a repeater should be able to independently adjust the frequency channels used by its equipment without any outside control, the Examiner respectfully disagrees. First, it is again noted that the Treatch reference is used in the rejections above as merely a teaching of using control signals to adjust the frequency channels used by a repeater. It is also noted that the control of the frequency channels used by the repeater of Treatch is based on signals received by antenna 53. Therefore, since the rejections above are based the teachings Rhodes et al. and Laham et al. (the teachings of sending control signals from a management system to a control means of a repeater) and the teachings of Treatch (the teaching that a control signal is used to adjust frequency channels used by a repeater), and since the data used to change the frequency in the teachings of Treatch is received wirelessly using antenna 53, Treatch does not teach away from the claimed invention and the rejection is proper.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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